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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/808,650	03/25/2004	Jean-Claude Gasquet	1948-4841	6110
27123	7590	12/15/2005		EXAMINER
MORGAN & FINNEGAN, L.L.P. 3 WORLD FINANCIAL CENTER NEW YORK, NY 10281-2101			HAN, JASON	
			ART UNIT	PAPER NUMBER
			2875	

DATE MAILED: 12/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/808,650 Examiner Jason M. Han	GASQUET ET AL. Art Unit 2875

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 25 March 2004.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-17 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1,5,10,16 and 17 is/are rejected.
 7) Claim(s) 2-4,6-9 and 11-15 is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 25 March 2004 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>20041007</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. The disclosure is objected to because of the following informalities:
 - a. Page 5, Line 2: "lugs 9b" should be rewritten to read "lugs 9a, 9b";
Appropriate correction is required.

Claim Objections

3. Claims 10, 11, 15 are objected to because of the following informalities: In the claims, the Applicant recites the limitation, "the electrodes" or "each electrode", which lacks antecedent basis. Appropriate correction is required.
4. Claim 14 is objected to because of the following informalities: In Lines 5-6 of the Claim, the Applicant uses the pronoun "its", which does not positively recite or refer to a specific structure (i.e., base of the LED). Appropriate correction is required.
5. Claim 16 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. At present, both claims recite similarly that the base of the diode is made of copper.
6. Claims 14 and 16 are objected to because of the following informalities: The Applicant recites the limitation, "radiator" or "heat radiator". Applicant should remain

consistent in language use (i.e. heat-radiating element). Appropriate correction is required.

Double Patenting

7. Claims 1 and 5 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over Claims 1, 8, and 10-11 of U.S. Patent No. 6,821,143. Although the conflicting claims are not identical, they are not patentably distinct from each other because they provide similar structure, wherein an LED is laser spot welded to a metallic heat-radiating element. The contrast being the place of laser spot welding, whereby the former patent teaches laser spot welding the electrodes of the LED, as opposed to the base of the LED of the current application, to the heat-radiating element. It is obvious that one would want to provide further heat dissipation and strengthen the hold of the LED by providing the laser spot welding of the base.

It also would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the LED base out of copper material, since it has been held to be within general skill of a worker in the art to select a known material on the basis of its suitability for the intended use. *In re Leshin*, 125 USPQ 416. In this case, copper is a suitable material for the known characteristics of thermal and electrical conductivity.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 5, 10, and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hochstein (US Patent 6428189) in view of lehisa (US Publication 2004/0264540).

9. With regards to Claim 5, Hochstein discloses a power light-emitting diode [Figures 1-4: (20, 22, 24)] having a base [Figures 1-4: (28)], which is fixed to a metallic heat-radiating element [Figures 1-3: (30); Column 2, Lines 59-61].

Though Hochstein does not specifically teach the base being mainly made from copper, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the base out of copper, since it has been held to be within general skill of a worker in the art to select a known material on the basis of its suitability for the intended use. *In re Leshin*, 125 USPQ 416. In this case, copper is suitable for being thermally conductive, which is commonly known in the art with a heat sink/slug being attached or part of an LED.

Hochstein also does not specifically teach the base of the diode being fixed by laser spot welding to the radiating element.

lehisa teaches, "A high-output high-intensity solid-state laser unit has come to be actively used for spot welding and seam welding process for electric and electronic parts and for scribing and cutting process for metals, semiconductors, ceramics, and the like" [Page 1, Paragraph 2].

It would have been obvious to one ordinarily skilled in the art at the time of invention to incorporate the laser spot welding technique of lehisa in fixing the light

emitting diode base to the heat-radiating plate of Hochstein, so as to limit heat generation and protect the LED via precise and efficient welding.

10. With regards to Claim 10, Hochstein in view of lehisa discloses the claimed invention as cited above. In addition, Hochstein teaches electrodes [Figures 1-4: (26)] of the light emitting diode being attached to conductive lugs [Figures 1-2: (18)], but does not specifically teach the attachment means being provided by laser spot welding.

lehisa teaches, "A high-output high-intensity solid-state laser unit has come to be actively used for spot welding and seam welding process for electric and electronic parts and for scribing and cutting process for metals, semiconductors, ceramics, and the like" [Page 1, Paragraph 2].

It would have been obvious to one ordinarily skilled in the art at the time of invention to incorporate the laser spot welding technique of lehisa in fixing the light emitting diode electrodes to the conductive lugs of Hochstein, so as to limit heat generation and protect the LED via precise and efficient welding.

11. With regard to Claims 16-17, Hochstein in view of lehisa discloses the claimed invention as cited above. Though Hochstein in view of lehisa does not specifically teach the base or heat-radiating element being mainly made from copper, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the base or heat-radiating element out of copper, since it has been held to be within general skill of a worker in the art to select a known material on the basis of its suitability for the intended use. *In re Leshin*, 125 USPQ 416. In this case, copper is suitable for being thermally conductive and suitable for welding purposes.

12. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hochstein (U.S. Patent 6428189) in view of lehisa (US Publication 2004/0264540).

13. Since Claim 1 is a method claim reciting the structural limitations of Claim 5, the prior art of Hochstein in view of lehisa is an obvious teaching over the scope of the present claim. It has been held an obvious matter that when all structural limitations of an apparatus have been satisfied by the prior art, one of ordinary skill in the art could construct a method claim for said apparatus.

Allowable Subject Matters

14. Claims 2-4, 6-9, and 11-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

15. The following is a statement of reasons for the indication of allowable subject matter: The Applicant has sufficiently recited and narrowly defined in the dependent claims how to attach the LED to the heat-radiating element via specific laser spot welding or additional structure for attachment purposes (i.e., projections, openings, insulating support), and the prior art fails to teach or suggest the combination of structural elements disclosed and claimed herein.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following references are cited to further show the state of the art pertinent to the current application, but are not considered exhaustive:

US Patent 4707067 to Haberland et al;

US Patent 5631990 to Hashizume;

US Patent 6259192 to Becker et al;

US Patent 6541800 to Barnett et al;

US Patent 6597114 to Tagawa et al;

US Publication 2003/0218417 to Chin.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M. Han whose telephone number is (571) 272-2207. The examiner can normally be reached on 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (571) 272-2378. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JMH (12/10/2005)


Stephen Husar
Primary Examiner